ABSTRACT

A dynamic stabilization construct for implantation within the spine comprises bone anchors that include a flexible portion between the bone engaging and head portions of the anchor. The head portion is configured to mate with different types of stabilization elements adapted to span between spinal motion segments. The engagement portion can also be configured for different types of fixation to a motion segment, such as within the pedicle of a vertebra. The flexible portion permits limited bending of the bone anchor beneath the level of the stabilization element. In one embodiment, the flexible portion is integrated into the body of the bone anchor in the form of hinge elements. In another embodiment, a separate flexible element, such as a spacer or spring, is interposed between the head and engagement portions. In a further embodiment, the bone anchor includes a portion having a reduced cross-section. The flexible bone anchors may be used to tailor the dynamic flexibility of spinal stabilization instrumentation at each level of the construct.